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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/895,326	07/02/2001	Katsuaki Hamamoto	010848	6711

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EXAMINER	
ZHENG, EVA Y	
ART UNIT	PAPER NUMBER
2611	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/04/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	09/895,326	HAMAMOTO, KATSUAKI	
	Examiner	Art Unit	
	Eva Yi Zheng	2611	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *17 January 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) *1-12* is/are withdrawn from consideration.

5)☒ Claim(s) *13-15 and 17-19* is/are allowed.

6)☒ Claim(s) *16 and 20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 16 and 20 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 16 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jamal et al (US 6,724,813) in view of Applicant Admitted Prior Art (AAPA).

a) Regarding claim 16, Jamal et al discloses a scrambling code generation apparatus (Fig. 7) generating a scrambling code used in a scrambling operation of transmission data, comprising:

a storage circuit storing predetermined initial values (output of a first feedback shift register);

a logic circuit (a second shift feedback register); and

an arithmetic circuit that receives said logic circuit as an input (a circuit that receive the output of the first and second feedback shift register), multiplies said predetermined initial values stored in said storage circuit by said logic circuit to compute

a value of each code forming said sequence of scrambling codes (it is well known that XOR gate perform multiplication operation).

Jamal et al disclose all the subject matters above except for the specific teaching that the logic circuit produces matrix, and the matrix being used to form scrambling codes based on predetermined polynomial.

However, it is well known in the technology that a scrambling code generator comprises feedback shift registers that generate matrix and polynomial set. In addition, the AAPA teaches that the registers can be represented as a matrix after certain number of shift operation ([0036-0051]). And the registers generate a scrambling code sequence base on polynomial set ([0025-0027]). Therefore, it is obvious to one of ordinary skill in art to recognize that the shift registers of Jamal et al produce matrix and generate polynomial set for scrambling code generator. By doing so, produce optimum scrambling code for digital communication system.

b) Regarding claim 20, Jamal et al discloses a portable radio terminal of digital radio communication, comprising:

a storage circuit storing predetermined initial values (output of a first feedback shift register);

a logic circuit (a second shift feedback register); and

an arithmetic circuit that receives said logic circuit as an input (a circuit that receive the output of the first and second feedback shift register), multiplies said predetermined initial values stored in said storage circuit by said logic circuit to compute

a value of each code forming said sequence of scrambling codes (it is well known that XOR gate perform multiplication operation).

Jamal et al disclose all the subject matters above except for the specific teaching of a transmission related modem and the logic circuit produces matrix, and the matrix being used to form scrambling codes based on predetermined polynomial.

However, AAPA disclose a transmission related modem (inherent as base station) modulating transmission data ([0004]-[0014]); and a radio processor applying processing for radio communication on transmission data of said transmission related modem to send out the processed data as a transmission radio signal ([0004]-[0014]). Also, it is well known in the technology that a scrambling code generator comprises feedback shift registers that generate matrix and polynomial set. In addition, the AAPA teaches that the registers can be represented as a matrix after certain number of shift operation ([0036-0051]). And the registers generate a scrambling code sequence base on polynomial set ([0025-0027]). Therefore, it is obvious to one of ordinary skill in art to recognize that the shift registers of Jamal et al produce matrix and generate polynomial set for scrambling code generator. By doing so, produce optimum scrambling code for digital communication system.

Allowable Subject Matter

4. Claims 13-15 and 17-19 would be allowable.

5. The following is a statement of reasons for allowable subject matter:

None of the prior art teaches or suggest a scrambling code generator comprise a control circuit for controlling an arithmetic circuit and an input circuit so that the arithmetic circuit computes values of registers and the input circuit applies the computed values into the registers until all the plurality of stages of registers store the values based on the computed and input values. The shift register continues a shift operation based on valid values stored in all of the plurality of stages of registers to generate the sequence of scrambling codes.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

4. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eva Y Zheng whose telephone number is 571-272-3049. The examiner can normally be reached on M-F, 7:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chieh Fan can be reached on 571-272-3042. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Eva Yi Zheng
Examiner
Art Unit 2611

March 28, 2007

CHIEH M. FAN
SUPERVISORY PATENT EXAMINER